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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/758,033	11/27/1996	GARY L. CLAYMAN	INGN:022	5378

7590 09/25/2007

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EXAMINER	
SHEN, WU CHENG WINSTON	
ART UNIT	PAPER NUMBER
1632	

MAIL DATE	DELIVERY MODE
09/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	08/758,033	CLAYMAN, GARY L.	
	Examiner	Art Unit	
	Wu-Cheng Winston Shen	1632	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11-14,16-20,26-32,36,37 and 146-150* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11-14,16-20,26-32,36,37 and 146-150* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 November 1996* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim amendments filed on 07/05/2007 have been received and entered. Claim 1-9, 11-14, 16-20, 26-32, 36, 37, and 146-150 are pending. Claim 146 has been amended

This application 08/758,033 filed on November 27, 1996 claims benefit of the provisional application 60/007,810 filed on 11/30/1995.

Claim Rejection - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-9, 11-14, 16-19, 26, 36, 37, and 146-150 remain rejected under 35 U.S.C. 102(e) as being as being anticipated by **Xu et al.** (Xu et al., U.S. Patent 5,496,731 issued on March 5, 1996; listed as reference A12 in the IDS filed by applicant on Nov. 21, 2006) as evidenced by **Fung** (U.S. Patent 6,590,086, issued July 8, 2003) and **Donehower, 1994** (Tumor suppressor gene p53 and apoptosis, *The Cancer Bulletin* 46: 161-166, 1994; listed as reference C89 in the IDS filed by applicant on Nov. 21, 2006). Previous rejection is ***maintained*** for the reasons of record advanced on pages 3-7 of the Non-Final office action mailed on 03/07/2007.

For clarity and completeness of this office action, the rejection of record advanced on pages 3-7 of the Non-Final office action mailed on 03/07/2007 is recited below.

Xu et al. teach broad-spectrum tumor suppressor genes, gene products and methods for *tumor suppressor gene therapy* (See title, Xu et al., 1996). The tumor suppressor genes taught by Xu et al. include **p53** (See section 1.3.3.3, column 5, Xu et al., 1996).

Xu et al., teach methods of treating a mammal having a disease or disorder characterized by abnormal cellular proliferation, such as a tumor or cancer and methods of treating abnormally proliferating cells, such as tumor or cancer cells (See abstract, Xu et al., 1996). In a more preferred embodiment the tumor or ***cancer cells are cells having no detectable genetic defect of a tumor suppressor gene --- a p53 gene*** (See lines 30-33 column 11, Xu et al., 2003) --- which reads on the limitation of a tumor cell expressing wild-type p53 recited in claim 1 of instant application ---; consistently, Xu et al. further teach that an advantage of the invention by Xu et al. is that *the methods and products herein disclosed* (which reads on expressing functional p53 for treating tumor recited in claim 1 of instant application) *can be used for therapeutic treating* ***tumors having no specific tumor suppressor gene defects***, which provides a significant advantage over previous techniques for human tumor suppressor gene therapy (See lines 22-27, column 15, Xu et al., 1996). Moreover, Xu et al. teach the ***human*** *bladder cancer* represents an ideal model for practicing tumor suppressor gene therapy of solid tumors (See lines 1-2, column 30, Xu et al., 2003), and the treatment of ***human*** *non-small cell lung cancers in vivo* (See lines 64-65, column 30, Xu et al., 1996).

With regard to various tumors (claims 2-5 of instant application), Xu et al. teach benign and malignant tumor (See line 50-51, column 11, Xu et al., 1996), lung carcinoma (line 35, column 11, Xu et al., 1996), and various sarcomas (See Table 1, column 15, Xu et al., 1996).

With regard to routes for administering viral expression vector (step (b) of claim 1, and claims 147-150 of instant application), Xu et al. teach effective concentration of active vectors can be administered topically, intraocularly, *parenterally*, orally, intranasally, *intravenously*, intramuscularly, subcutaneously or by *any other effective means*. In particular, the vector may be *directly injected into a target cancer or tumor tissue* by a needle in amounts effective to treat the tumor cells of the target tissue.

With regard to viral expression construct (claims 6-9, 19 of instant application), Xu et al., teach expression vectors compatible with mammalian host cells for use in genetic therapy of tumor or cancer cells, include, but are not limited to: plasmids, retroviral vectors, adenovirus vectors, herpes viral vectors, and non-replicative avipox viruses, as disclosed, for example, by U.S. Pat. No. 5,174,993 (See last paragraph, column 16, Xu et al., 1996); and an adenovirus type 5 (Ad5) deletion mutant, Ad-d1324, and a plasmid, pTG5955 (Rosenfeld, M. A., et al., Cell, 1992, 68:143-155) are used to construct an adenovirus vector able to infect mammalian cells and express a tumor suppressor protein under the control of the adenovirus type 2 (Ad2) major late promoter, the CMV promoter, the β-actin promoter or any other effective promoter (See lines 20-27, column 17, Xu et al., 1996). It is noted that an adenovirus type 5(Ad5) deletion mutant harbors deletions at E1 and E3 regions. It is also noted that regarding the p53-encoding ploynucleotide being tagged so that expression of p53 from said expression vector can be detected (claim 19 of instant application), the limitation reads on the selection of the

expression vector bearing neo gene, which is indirectly tagged to the p53 encoding polypeptide (See line 3, column 17, Xu et al., 1996).

With regard to tumor being resected following by an administration of a viral expression vector (claims 11-14, 26 of instant application), Xu et al. further teach the treatment of human non-small cell lung cancers *in vivo* is administered by bronchoscopy under topical or general anesthesia. To begin the procedure, *as much gross tumor as possible is resected endoscopically*. The residual tumor site is injected with the appropriate retroviral vector supernatant (Section 4.3.7), adenovirus suspension (Section 4.3.8) or plasmid vector-liposome complexes (Section 4.3.4 and 4.3.6) *at a volume of 5 ml to 10 ml* (See lines 7-11, column 31, Xu et al., 1996). Xu also teach retroviral vector at titer grater than 1×10^7 colony-forming unit (cfu/ml) and such treatment can be repeated as many times as necessary (See lines 36-40, column 30, Xu et al., 1996).

With regard to administration of a viral expression vector into a natural or artificial body cavity, and frequency of administration (claims 16-18, and 36-37 of instant application), Xu et al. further cancer or tumor present in a *body cavity* such as in the eye, gastrointestinal tract, genitourinary tract (e.g., the urinary bladder), pulmonary and bronchial system and the like can receive a physiologically appropriate composition containing an effective concentration of active vectors via direct injection with a needle or via a catheter or other delivery tube placed into the cancer or tumor afflicted hollow organ (See lines 6-15, column 19, Xu et al., 1996). Xu also teach erosolization treatments for lung cancer with a tumor suppressor gene/protein containing (purified protein or protein expressed from an expression vector) liposomes are

administered to a patient for 30 minutes, *three times daily for two weeks*, with repetition as needed (See lines 33, column 31, and lines 21-23, column 32, Xu et al., 1996).

Treating human tumors via p53 gene therapy by administration of vector(s) expressing functional p53 was known in the art at the time of filing of instant application as evidenced by Fung et al., 2003. It is worth noting that a mutated p53 can be functional. For instance, alteration of an amino acid subject to regulation by phosphorylation status of p53 that would render the p53 being constitutively active and functional. In particular, Fung et al. taught (i) the reintroduction of a wild-type cDNA of p53 have been shown to partially restore normal growth regulation as the reintroduced genes induce growth arrest or retardation in many different tumor cell types (See lines 47-50 column 1, Fung et al., 2003), (ii) a method of treating malignant cell diseases in individuals comprising administration concurrently or consecutively into a proliferating cancer cell of a functional a functional mutated p53 gene (See lines 37-40, column 5, Fung et al., 2003), (iii) in gene therapy, it would be highly desirable to have mutant forms of the p53 gene, the protein of which is already active even without further modification.

It is worth noting that the inherent properties of p53 anticipate that expression of functional p53 would result in the induction of apoptosis in a tumor cell. For instance, the identification of the tumor suppressor gene p53 as a mediator of apoptosis was known in the art at the time of filing of instant application as evidenced by Donehower, 1994. In particular, Donehower taught that wild-type p53 induces apoptosis upon imbalance in growth regulatory signals (See Figure 1, page 162, Donehower, 1994), and the apoptotic role of p53 in tumor cells and in normal cells (See from the third column, page 163 to the end of page 194).

Thus, Xu et al. clearly anticipates claims 1-9, 11-14, 16-19, 26, 36, 37 and 146-150 of the instant invention.

Applicant's arguments

With regard to whether claims 1-9, 11-14, 16-19, 26, 36, 37, and 146-150 being anticipated by Xu et al. (Xu et al., U.S. Patent 5,496,731) as evidenced by Fung (U.S. Patent 6,590,086, issued July 8, 2003) and Donehower, 1994, Applicant argues the following: **(i)** The Action states that at column 11, lines 30-33, Xu et al. teach an embodiment in which the tumor or cancer cells are cells having no detectable genetic defect of a tumor suppressor gene selected from the group consisting of an RB gene and a p53 gene. However, this statement is made in the context of treatment with p94RB and not p53 (see Xu, Summary of the Invention). Xu et al. teaches that the introduction of either p53 or RB^{110} into cells that have not undergone lesions at these loci does not affect cell proliferation, **(ii)** While the Action notes that section 1.3.3.3 in the Background of the Xu et al., patent teaches that p53 is a tumor suppressor gene, the Action does not identify any disclosure by Xu et al., that teaches all of the limitations of the current claims. With regard to the treatment of tumor cells using p53, Xu's section 1.3.3.3 states: "Tumor cell lines deleted for p53 have been successfully treated with wild-type p53 vector to reduce tumorigenicity. However, ***the introduction of either p53 or RB^{110} into cells that have not undergone lesions at these loci does not affect cell proliferation***." (Xu, col. 5, ln. 21-26). This does not teach a method of inhibiting growth of (claim 1) or inducing apoptosis (claim 146) in a tumor cell expressing wild-type p53 (claims 1 and 146) . In fact, it teaches away from such an approach, **(iii)** The treatments contemplated by Xu et al. are described as using a $p94^{RB}$ expression vector or $p94^{RB}$ protein (Xu, Abstract); and **(iv)** The Action fails to establish a *prima*

facie case of anticipation because Xu does not teach all of the limitations of the current claims. Xu et al. is concerned with "a broad-spectrum tumor suppressor gene and the protein expressed by that gene," which Xu et al. describes as a retinoblastoma protein of about 94 kD (Xu, Abstract).

Response to Applicant's arguments

Applicant's arguments filed 07/05/2007 have been fully considered and they are not persuasive. The Examiner acknowledges that the main focus of Xu et al. is on RB tumor suppressor gene, however, the summary of the invention clearly disclosed the following: ***In a more preferred embodiment the tumor or cancer cells are cells having no detectable genetic defect of a tumor suppressor gene selected from the group consisting of an RB gene and a p53 gene*** (See lines 30-33, column 11, Xu et al., 1996). The paragraph right before the abovementioned statement is, " In a more preferred embodiment the tumor or cancer cells to be treated are cells having one or more genetically defective tumor suppressor genes and oncogenes selected from the group consisting of an RB, a p53, a c-myc, an N-ras and a c-yes-1 gene." (See lines 25-29, column 11, Xu et al., 1996). Therefore, the context of these two paragraphs in specification clearly indicates two different scenarios: the first one is with respect to tumor cells expressing wild-type p53 (which may have a mutation in RB or other tumor suppressor genes) and the second one is with respect to tumor cells expressing defective p53.

Applicant emphasized that Xu et al. stated "***the introduction of either p53 or RB^{110} into cells that have not undergone lesions at these loci does not affect cell proliferation***." (Xu, col. 5, ln. 21-26), which Applicant argues Xu et al. teach away the limitation of claim 1 "inhibiting

growth of a tumor cell expressing wild-type p53 in a human subject with a solid tumor". The Examiner notes that the sentence immediately follows the recited statement is "Such experiments suggest that sensitivity of cells to the suppression of their growth by a tumor suppressor gene is dependent on the *genetic alterations* that have taken place in the cells". Based on the context in this paragraph of specification, the genetic alterations in the cells would encompass either *cells bearing a RB mutation with wild-type p53*, or cells bearing a p53 mutation with RB wild type. Accordingly, the Examiner does not consider the cited statement as a "teach away", rather, the paragraph overall (lines 21-37, column 5), noting the complex nature regarding intertwined functions of tumor suppressor genes P53 and RB in regulation of growth of tumor cells.

It is noted that a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). See MPEP 2141.02. However, "the prior art's mere disclosure of more than one alternative does not constitute a teaching away from any of these alternatives because such disclosure does not criticize, discredit, or otherwise discourage the solution claimed...." In re Fulton, 391 F.3d 1195, 1201, 73 USPQ2d 1141, 1146 (Fed. Cir. 2004). >See also MPEP § 2123.

Related to "teach away" argument, it is further noted that, "A *prima facie* case of obviousness can be rebutted if the applicant...can show that the art in any material respect taught away' from the claimed invention...A reference may be said to teach away when a person of ordinary skill, upon reading the reference...would be led in a direction divergent from the path that was taken by the applicant." In re Haruna, 249 F.3d 1327, 58USPQ2d 1517 (Fed. Cir.

2001). See MPEP 1504.03. Accordingly, the Examiner notes that a "teach away" argument is a secondary consideration for a 103(a) rejection.

The detailed teachings of Xu et al. matching limitations of claim 1 has been documented in the non-Final office action dated 03/07/2007, and reiterated on pages 3-6 of this office action. To further support the teachings of Xu et al. Fung et al and Donehower provided well-known knowledge at the time of filing regarding expressing functional p53 for cancer treatment and the function of p53 involves induction of apoptosis (See pages 6-7 of Non-Final office action, which is reiterated on page 6 of this office action).

In conclusion, Xu et al. clearly anticipate the limitation regarding a method of inhibiting growth of ***a tumor cell expressing wild-type p53*** recited in the claim 1 of instant application. Other claim limitations encompassed by the teachings of Xu et al. have been discussed in details in the Non-Final office action, and reiterated in this office action.

Claim Rejection - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Previous rejection of claims 1, 20, 27, and 28-32 under 35 U.S.C. 103(a) as being unpatentable over **Xu et al.** (Xu et al., U.S. Patent 5,496,731 issued on March 5, 1996; listed as reference A12 in the IDS filed by applicant on Nov. 21, 2006) taken with **Fung** (U.S. Patent

6,590,086, issued July 8, 2003) and **Roth et al.** (Roth et al., U.S. Patent 6,797,702 issued on September 28, 2004) is ***withdrawn*** because the signed reply filed on 07/05/2007 by Attorney of the record indicating the application and the Roth et al. reference were, at the time the invention was made, subject to an obligation of assignment to the Board of Regents of the University of Texas System. Thus, pursuant to 35 U.S.C. § 103(c), the subject matter disclosed in Roth et al. cannot preclude the patentability of the claimed invention under § 103.

The Examiner notes that with regard to whether Xu et al. disclosed a method of inhibiting growth of a tumor cell expressing wild-type p53, the Examiner's response to this argument has been documented in the preceding section of rejection of claims 1-9, 11-14, 16-19, 26, 36, 37, and 146-150 under 35 U.S.C. 102(e) as being as being anticipated by Xu et al. as evidenced by Fung (U.S. Patent 6,590,086, issued July 8, 2003) and Donehower, 1994.

With regard to prior art exclusion of **Roth et al.** by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a), Applicant arguments was found persuasive because Roth et al. is only qualified as a reference under 102(e), not under 102(a). Roth et al. being a reference under 102(e), prior art exclusion under 35 U.S.C. 103(c) does NOT need to be in a declaration of affidavit form. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

3. Previous rejection of claims 1-9, 11-14, 16-19, 26, 36, 37, and 146-150 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Xu et al.** (Xu et al., U.S. Patent 5,496,731 issued on March 5, 1996; listed as reference A12 in the IDS filed by applicant on Nov. 21, 2006) taken with **Zhang et al.** (Zhang et al., U.S. Patent 6,143,290 issued on Nov 7, 2000; listed as reference

A22 in the IDS filed by applicant on Nov. 21, 2006) and **Donehower, 1994** (Tumor suppressor gene p53 and apoptosis, *The Cancer Bulletin* 46: 161-166, 1994; listed as reference C89 in the IDS filed by applicant on Nov. 21, 2006), is ***withdrawn*** because the signed reply filed on 07/05/2007 by Attorney of the record indicating the application and the Zhang et al. reference were, at the time the invention was made, subject to an obligation of assignment to the Board of Regents of the University of Texas System. Thus, pursuant to 35 U.S.C. § 103(c), the subject matter disclosed in Roth et al. cannot preclude the patentability of the claimed invention under § 103.

The Examiner notes that with regard to whether Xu et al. disclosed a method of inhibiting growth of a tumor cell expressing wild-type p53, the Examiner's response to this argument has been documented in the preceding section of rejection of claims 1-9, 11-14, 16-19, 26, 36, 37, and 146-150 under 35 U.S.C. 102(e) as being as being anticipated by Xu et al. as evidenced by Fung (U.S. Patent 6,590,086, issued July 8, 2003) and Donehower, 1994.

With regard to prior art exclusion of **Zhang et al.** by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a), Applicant arguments was found persuasive because Zhang et al. is only qualified as a reference under 102(e), not under 102(a). Zhang et al being a reference under 102(e), prior art exclusion under 35 U.S.C. 103(c) does NOT need to be in a declaration of affidavit form. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine

grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-14, 16-20, 26-32, 36, 37 and 146-150 remain provisionally rejected under the judicially created doctrine of double patenting over claims 26, 29, 58, 89 of copending Application No. 09/968,958. Previous provisional rejection is ***maintained*** for the reasons of record advanced on pages 19-20 of the Non-Final office action mailed on 03/07/2007.

Applicant's arguments

With regard to claims 1-14, 16-20, 26-32, 36, 37 and 146-150 being provisionally rejected under the judicially created doctrine of double patenting over claims 26, 29, 58, 89 of copending Application No. 09/968,958, Applicant argues that, if a provisional double-patenting rejection is the only rejection remaining in an application, the Examiner should withdraw the rejection and permit the application to issue as a patent. MPEP § 804(I)(B), p. 800-15. After one application issues as a patent, the provisional double-patenting rejection in the remaining

application is converted to an actual double patenting rejection. Id. Applicant states that once either the present application or the '958 application issues as a patent, Applicant will file a terminal disclaimer, if appropriate, in the remaining pending application.

With regard to the Non-Final office action indicating that if claim 1 is found to be allowable, claim 146 will be objected to under 37 C.F.R. § 1.75 as being a substantial duplicate thereof, Applicant argues that the Action considers claim 146 as merely reciting a mechanism by which the method of claim 1 works. Applicant notes that such an objection would be improper. As stated in MPEP § 706.03(k), "court decisions have confirmed applicant's right to restate (i.e., by plural claiming) the invention in a reasonable number of ways. Indeed, a mere difference in scope between claims has been held to be enough." The scope of the phrases "inhibition of tumor cell growth" (recited in claim 1) and "induction of apoptosis" (recited in claim 146) are not identical.

Response to Applicant's arguments

The Examiner notes that the provisional rejection of claims 1-14, 16-20, 26-32, 36, 37 and 146-150 under the judicially created doctrine of double patenting over claims 26, 29, 58, 89 of copending Application No. 09/968,958, is NOT the only rejection remained in the instant application.

In the instant case, the method set forth in claim 1 of the instant application is essentially the same as that set forth in claims 29 and 58 of '958. Further, it is noted that claim 26 of application '958 encompasses essentially the same invention as encompassed by claims 1 and 146 of '033. Dependent claims in each application set forth specific types and amounts of

vectors, specific types of cancers, and specific times of administration that set forth inventions, which are essentially the same in breadth between both applications.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Applicant's arguments regarding the statement, should claim 1 be found allowable, claim146 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof, was found persuasive. The objection of claim 146 being substantial duplicate of claim 1 is ***withdrawn***.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. No claim is allowed.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication from the examiner should be directed to Wu-Cheng Winston Shen whose telephone number is (571) 272-3157 and Fax number is 571-273-3157. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the supervisory patent examiner, Peter Paras, can be reached on (571) 272-4517. The fax number for TC 1600 is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you

would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Wu-Cheng Winston Shen, Ph. D.
Patent Examiner
Art Unit 1632

/Valarie Bertoglio, Ph.D./
Primary Examiner
AU 1632